

REMARKS

Introduction

Claims 1 - 12 were originally pending in the PCT application to which this application claims priority. On September 22, 2000, a new set of claims 1 - 7 were submitted to the International Preliminary Examining Authority. Accordingly, claims 1 - 7 are presently pending in this application.

The Specification

The application was objected to on the basis that it does not contain an abstract of disclosure as required by 37 C.F.R. 1.72(b). Accordingly, the application has been amended to include an abstract. No new matter has been added.

Claim Rejections

35 U.S.C. § 102

Claims 1 - 4 were rejected under 35 U.S.C. § 102(b) as being anticipated by both the Oishei et al. '510 patent and the Vassiliou '480 patent. In addition, claims 1 - 3 and 5 - 7 were rejected under 35 U.S.C. § 102(b) as being anticipated by the German Kohler '293 patent. A claim is said to be anticipated where each and every limitation of the claim can be found in a single prior art reference. In this case, applicant respectfully submits that independent claim 1 describes an invention that includes structure that is neither disclosed nor suggested by the Oishei et al., Vassiliou, or Kohler patents. Claims 2 - 7 are each ultimately dependent upon independent claim 1

and include further perfecting limitations. Accordingly, applicant respectfully traverses this rejection and requests that it be withdrawn for the reasons set forth below.

The Oishei et al. '510 Patent

The Oishei et al. '510 patent discloses a conventional "tournament style" windshield wiper that includes a primary lever 17, a secondary lever 20 pivotally mounted beneath the primary lever via a pin 21, and a yoke 22 mounted beneath the secondary lever 20 by a pin 23. The Oishei et al. '510 patent further teaches that wiping pressure is applied in a 1:3 ratio from the primary lever 17 to the secondary lever 20 and then to an outer channel holder 24 via the yoke 22. In turn, the channel 24 forces the wiping blade 43 into contact with the curved windscreen. The channel 24 has prongs 66, 67 which, in combination with a downwardly turned end portion 68 prevent the inner holding channel 28 from sliding out of engagement with the outer channel 24.

However, the Oishei et al. '510 patent neither discloses nor suggests a windscreen wiper that includes a *unitary elongate curved beam* and a rubber blade mounted to the beam. Since it does not disclose such a beam, the Oishei et al. patent cannot disclose that a beam has a protective end formation located at at least one of its tips. Furthermore, the Oishei et al. patent neither discloses nor suggests that the end formation comprises a deformed end of the beam which projects beyond an end portion of the rubber blade. Thus, applicant respectfully submits that the Oishei et al. '510 patent does not anticipate nor render obvious the invention described in claim 1 of the patent application.

The Vassiliou '480 Patent

The subject matter of the Vassiliou '480 patent is even further afield from the unitary beam blade windscreen wiper of the present invention than is the tournament style windshield wiper assembly disclosed by Oishei et al. More specifically, the Vassiliou '480 patent discloses a longitudinally flexible squeegee that is employed in connection with stencil screen printing or silk screen printing operations. (See column 1, line 6). Thus, the Vassiliou '480 patent does not disclose or suggest a windscreen wiper that includes a unitary elongate curved beam and a rubber blade mounted to the beam. Accordingly, the Vassiliou '480 patent does not disclose a beam having a protective end formation at at least one of its tips. Furthermore, the Vassiliou '480 patent does not disclose that the end formation comprises a deformed end portion of the beam which projects beyond an end portion of the rubber blade 14.

The Kohler '293 patent

The Kohler '293 patent discloses a wiper blade for windshield wiper mechanisms for vehicles. The copy of this patent forwarded with the July 3, 2003 Office Action is in the German language. Accordingly, applicant has taken the liberty to have this patent translated into English. A copy of the English translation of the German Kohler '293 patent has been submitted herewith as a part of an information disclosure statement. Referring to the English translation of this German patent, it will be clear that the Kohler '293 patent discloses a wiper blade including a curved bow 10 that has a somewhat u-shaped cross-section. The bow 10 is operatively connected to a pair of spring rails 21 that are supported in the wiper element 22. The bow 10 is operatively connected to the spring rails 21 via slots or "openings" 27 formed in the inside surface of the inverted u-shaped bow

10. In this way, the bow 10 and the spring rails 21 cooperate together to exert transverse forces on the wiper element 22. Thus, the function of the spring rails 21 is not only to connect the wiper element 22 to the bow 10, but also to aid in the application of transverse forces to the wiper element in response to straightening of the bow 10. If this was not the case, the spring rails 21 need not have been springs, but could instead have been any connection formations. In addition, the bow 10 is made of plastic material. Thus, the end cross pieces 17, 19 are formed during the molding of the bow 10 and thus, the end pieces 17, 19 are *not deformed* end portions. Accordingly, the Kohler '293 patent does not disclose or suggest a windscreen wiper that includes a *unitary elongate curved beam* and a rubber blade mounted to the beam. In addition, the Kohler '293 patent neither discloses nor suggests that the windscreen wiper includes protective end formations that comprise a *deformed end portion of the beam*. The deformed end portions are important features of the present invention because they facilitate manufacture of the windscreen wiper and increase the efficacy of the protective end formations. On the other hand, the Kohler '293 patent teaches the use of a film hinge 20 adjacent one end of the cross pieces 19. The film hinge 20 is employed to insert the wiper strip into the bow 10. The requirement of an additional hinge in order to make the end cross piece 19 displaceable not only increases the manufacturing costs of the bow 10, but also compromises the structural integrity and force applying characteristics of the composite structure including the bow 10 and the spring rails 21. The windscreen wiper of the present invention overcomes these difficulties by providing deformed end portions on the beam.

The Windscreen Wiper Assembly of the Present Invention

In contrast to the prior art, the windscreen wiper of the present invention is directed toward a beam blade type wiper assembly as opposed to a tournament style windshield wiper assembly. To this end, the windscreen wiper of the present invention includes a *unitary elongate curved beam* and a rubber blade mounted to the beam. The beam has a protective end formation located at at least one of its tips. The end formation comprises a *deformed end portion of the beam* which projects beyond an end portion of the rubber blade. The importance of the distinguishing feature of the beam blade type windshield wiper assembly as opposed to the tournament style wiper assembly cannot be over-emphasized in this case. In the art of windshield wiper manufacturing, the term “beam” is used in respect to the structure which serves to force a wiper blade transversely onto the windshield. This is consistent with the definition of the word “beam” given by McGraw-Hill’s Dictionary of Scientific and Technical Terms (fifth edition): “a body, with one dimension large compared with the other dimension, whose function is to carry lateral loads (perpendicular to the large dimension) and bending movements.”

The critical function of the windshield wiper disclosed in the Oishei et al. ‘510 patent is performed by a tournament style windshield wiper assembly having levers 17, 20 and 22. In addition, the tournament style windshield wiper assembly disclosed by the Oishei et al. ‘510 patent includes a channel 24 that serves as a casing for holding the wiping blade 43. However, the channel 24 does not itself play any part in the application of a transverse force to the wiping element 43. The structure of the tournament style windshield wiper assembly disclosed by Oishei et al. is in stark contrast to the unitary beam of the present invention, where transverse forces are applied to the wiping blade by the beam 12 due to resistance to the force straightening of the beam 12 from its free

form curvature. The windscreen wiper is specifically described as a “beam” to distinguish the single element which both holds and applies forces to the wiping blade from the tournament style or “composite” force-applying systems such as that disclosed in the Oishei et al. ‘510 patent.

The Vassiliou ‘480 patent is directed toward a squeegee and the Kohler ‘293 patent is simply a variation on the “tournament style” theme that employs a pair of spring rails 21 to transfer forces from a primary lever or bow 10 to the wiping element 22. None of these patents are directed toward beam-blade type windscreen wipers, as is the present invention.

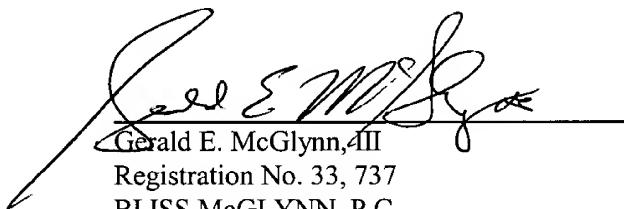
Thus, it is respectfully submitted that independent claim 1 recites structure that is not disclosed or suggested by the prior art and is patentably distinguishable from the subject matter of the Oishei et al. ‘510, the Vassiliou ‘480, and the German Kohler ‘293 patents discussed above. Claims 2 - 7 are all ultimately dependent upon independent claim 1 and add further perfecting limitations. Accordingly, applicant respectfully submits that the present invention has been adequately defined over the prior art of record in this case.

Conclusion

Applicant respectfully submits that the prior art references, alone or in combination, do not disclose or suggest the present invention. However, and even if they did, they could only be applied through hindsight after restructuring the disclosures of the prior art in view of the unitary elongate curved beam blade type windshield wiper assembly of applicant's invention. A combination of the prior art to derive applicant's invention would, in and of itself, be an invention.

Accordingly, applicant respectfully solicits the allowance of the claims pending in this case.

Respectfully submitted,



Gerald E. McGlynn, III
Registration No. 33, 737
BLISS McGLYNN, P.C.
2075 W. Big Beaver, Suite 600
Troy, MI 48084
(248) 649-6090

Date: October 2, 2003
Attorney Docket No. 0182.00002